

Glen Canyon Dam Technical Work Group
FINAL Meeting Minutes
March 30, 2004

Conducting: Norm Henderson, Chairman

Committee Members Present:

Mary Barger, WAPA
Marklyn Chee, Navajo Nation
Kerry Christensen, Hualapai Tribe
William Davis, CREDA
Lisa Force, Grand Canyon Trust
Lloyd Greiner, UAMPS
Christopher Harris, CRB/CA
Amy Heuslein, BIA
Matt Kaplinski, GCRG
Glen Knowles, USFWS

Dennis Kubly, USBR
Phillip Lehr, Colo. River Comm./NV
Ken McMullen, NPS/GCNP
Bill Persons, AGFD
John Ritenour, NPS/GLCA
D. Randolph Seaholm, CWCB
Mark Steffen, Federation of Fly Fishers
Larry Stevens, Grand Canyon Wildlands Council
Mike Yeatts, The Hopi Tribe

Committee Members Absent:

Jonathan Damp, Pueblo of Zuni
Illa Bullets, So. Paiute Consortium
Robert King, UDWR

John Shields, WY State Engineer's Office
John Whipple, NM Interstate Stream Comm.

Alternates Present:

For:

Interested Persons:

Kurt Dongoske, CREDA
Helen Fairley, USGS/GCMRC
John "JD" Kite, USGS/GCMRC
Paul Li, Bob Lynch's Office
Jeff Lovich, USGS/GCMRC

Ted Melis, USGS/GCMRC
Anthony Miller, Colo. River Comm./NV
Randall Peterson, USBR
Ken Rice, USBR/Glen Canyon Dam

Meeting Recorder: Linda Whetton, USBR

Convened: 9:40 AM

Welcome and Administrative Items. The chairman welcomed the members, alternates, and general public. A quorum was established, introductions were made, and attendance sheets (**Attachment 1**) distributed.

1. Jeff Lovich introduced John "JD" Kite as the new Administrative Officer for the Grand Canyon Monitoring and Research Center.
2. The chairman announced that Perri Benemelis terminated from the Arizona Department of Water Resources on March 26, 2004, to accept a job with the City of Phoenix Attorney's Office.

Review of Action Items

1. **CONTINUING ACTION ITEM.** Jeff Lovich asked for clarification on what was being expected from GCMRC on two specific issues: (1) Review of the Hualapai Facility, whether that's a review that GCMRC is expected to do or whether it's going to be competitively awarded or some agency is going to do it, and (2) the issue of monitoring parasites and diseases because their record indicates that AGFD will actually develop a proposal to do that work and then GCMRC will handle the contract in making that award.

Comments:

- *We were expressly asked to delete that and not to make recommendations on how to implement. There were all sorts of language to take that out. There was an item in there about how to maintain objectivity, conflict of interest, etc. (Davis)*
- *As a procurement question with the Hualapai Facility, is there agreement upon who is qualified to evaluate that facility? Did the HBC AHG consider how this was to be done? (Melis)*
- *Need to go back to the AMWG meeting minutes because some of that \$40,000 was for evaluation. (Christensen)*

The chairman read the AMWG Motion: "Modify Line 84 in the 2004 Work Plan (line 84 in the proposed 2005 budget) to evaluate the Hualapai's Tribe fish facility to see if it is in compliance with the USFWS feasibility study and, if so, to work on culture techniques for the HBC."

- *Someone, maybe the Center, needs to look at that FWS feasibility study on rearing humpback chub study. (Persons)*
- *Is there a mechanism to go back to the AMWG and ask them what they meant? Is it appropriate to put on hold until the next AMWG meeting to get some clarification? (Knowles)*
- *Apparently a second revision is needed on the study. GCMRC has requested FWS to do that with a target completion date of August 2004. (Lovich)*

The chairman deferred further discussion as it would be addressed in another agenda item.

2. Done. **NEW ACTION ITEM:** Linda will send an e-mail message to the AMWG reminding them to provide comments on conflict of interest and procurement concerns to Mike Gabaldon by close of business April 2, 2004.
3. **CONTINUING ACTION ITEM:** Bill Persons will provide an update on the metrics for a June/July meeting and lead the TWG to looking at the bigger issue (management objectives). Bill will prepare a report and have the GCMRC and possibly the SAB review prior to presenting to the TWG. The Core Monitoring AHG will assist GCMRC in developing metrics as they exist.
Discussion: Bill Persons said it was his understanding there were questions about the management objections and the metrics to be used for the management objectives and

wondered if the management objectives were specific for Lees Ferry. Norm said he thought there was a specific metric for the Lees Ferry fishery and that Bill's presentation should focus on what AGFD is doing with regard to monitoring that population vs. not using what was proposed in the management objectives. Bill said the metric in the management objectives is a population estimate and the number of fish calls for 100,000 fish with a certain condition from a certain growth rate. Bill said they do not estimate population size every year because it is timely and costly but are trying to model that population size and then periodically do a marked recapture population estimate. Norm suggested that if there's a reason to change the objective to do a better job of assessing that population than what was anticipated through the objective originally then it should be brought up for TWG discussion with a possible recommendation to the AMWG to make that change in the management objective.

Comments:

- *How about an assessment of all management objectives and all metrics and whether or not the metrics meet the management objectives and whether this program has information that it needs to write a SCORE Report and a report to Congress on what progress is being made? (Kubly)*
- *When we first talked about this about 2-3 years ago as an initiative that the Center would try to help with, that led to implementation of the MATA approach. Originally it was intended to help the group identify targets numerically, quantitative targets, and then it morphed into an experimental planning process. If you go back through the meeting minutes for the past 2-3 years, the group talked about using the MATA approach to get closer to the quantitative targets. The original intent was to help the TWG develop quantitatively the range of what was even possible based on the modeling. (Melis)*
- *It would be useful to have a matrix that has the management objectives or the metrics in it as a reminder of what's best for the various resources in the canyon. I would like to see development of that bigger matrix. (Seaholm)*
- *It would be a good way to focus our discussion on making this bridge from structure and dynamics of the ecosystem to actual monitoring and how these metrics relate to our management objectives. (Stevens)*
- *Propose the presentation be done in two scales: one of which is in detail for Lees Ferry trout because this is a resource that we know as much about or more than we do on any of the other resources that are under consideration, and would also like to suggest we do it in a coarser scale which would be for GCMRC to bring forth management objectives and other known metrics, if they exist, for those resources so that we can begin to collect and then find out whether we have just the tip of the iceberg or we have the iceberg. And then whether we would recommend to the SPAHG that this is an unfinished task but one which needs to be done so that at some point in time we can actually report progress by this program under the GCPA because that's what the management objectives are about. It would be good to have Bill's presentation and a revelation of the management objectives and metrics to portray to the AMWG at their August meeting, which means the presentation would have to be done before July 9. (Kubly)*

Bill said he was pretty busy in April and May and wants to get input from his fishery biologist. He will plan on making a presentation for sometime in June or July.

4. **DONE.**

5. **CONTINUING ACTION ITEM.** The TWG will send additional comments on the TWG Operating Procedures to the TWG chairman with a copy to Linda by April 14, 2004. Further discussion on this subject will be held at the next TWG meeting.

6. Done.

7. Done.

Review and Approval the February 2-3, 2004, Meeting Minutes.

Pending a few minor corrections and without objection, the minutes were approved.

Report/Assignments from the AMWG Meeting. The chairman reviewed the motions from the last AWMG Meeting (**Attachment 2**) and reported that two items were changed in the budget: (1) modification of the refugia plan into an evaluation of the Hualapai Fish facility, and (2) concurrent population estimates that was originally an implementation of the expert panel recommendations got folded back into funding of concurrent population estimates. Discussion was deferred as the items will be addressed as part of the outyear budget agenda item scheduled for later in the day.

AMP FY04-FY05 Activity Schedule. Norm presented a conceptual timeline on all the different AMP items/assignments (**Attachment 3a**).

Comments:

- *It's important to capture all activities including those being done by the ad hoc groups. (Heuslein)*
- *Add dates of TWG meetings. (Persons)*
- *Meetings should be subservient to our objectives. (Lovich)*
- *Need to finish some of the metrics identified in the Strategic Plan. (Seaholm)*
- *Workloads can't be accomplished without more people, consider rescheduling activities, contracting work out, etc. (Greiner)*
- *Recommend a review process be adequately developed. (Stevens)*

Norm asked if there were any objections or concerns with the TWG moving forward with the activities identified.

Jeff reminded the TWG that GCMRC is looking for a 6-month window to accomplish the three planning elements (GCMRC Strategic Plan, Core Monitoring Plan, and Long-term Experimental Plan).

Norm presented a revised activity schedule (**Attachment 3b**) and said some of the items were deferred: (1) TCD timeline was pushed out for three months, (2) timeline for the experimental flows was moved out along with the (3) budget development and work plan for FY06. He said the changes were all designed to give a window for GCMRC and the TWG to develop the planning documents.

Jeff said he and his staff went through the FY04 work plan yesterday with the purpose of selecting activities that would give them additional flexibility in trying to produce credible products. They feel that if they invest the time now and wisely and selectively defer some items in the near future, that the ground work laid today will make it a lot easier in the annual budget process. He distributed a list of the items that could be deferred from FY04 to FY05 (**Attachment 3c**). He said the Core Monitoring Plan and the Research Plan in particular will outline a series of recommendations for a course of action that will make large portions of the budget exercise "fill in the blank" on an annual basis. He strongly believes that GCMRC needs six months to do the work in order to prepare credible documents. He went through the deferral list in detail with the TWG.

Comments:

- *HBC #15. Bill Persons said in the past they have tried to work cooperatively with Rebecca Cole (FWS parasitologist from Wisconsin) and he feels she should be contacted about doing the work. Bill thought she might also have a source of funding and could possibly bring a graduate student next spring to process the samples because she has the expertise and AGFD doesn't. He would like to*

get that project get started especially since the river is warming and there is evidence that the parasite loads are affected by temperature - the warmer the water, the higher the parasite loads tend to be. Jeff responded said he would be more than happy to accommodate that work being done but cautioned that making that change would impact GCMRC's schedule for completing their high priority assignments. Dennis said the language in the HBC Comprehensive Plan identifies the development of a plan that would go forward with potential control and suppression and would have vested within it a monitoring project that would determine whether or not control and suppression were being affected. He wondered what work gets done first – the letting of a contract to go out and monitor parasites or the development of the plan that would have in it an assessment of potential or any control and suppression.

- PA #6. Amy asked what the schedule was for the PEP cultural monitoring. Helen said there isn't a firm date and presumably it will be done in the late summer/early fall.
- E4. Matt said he thought the PEPs could provide input to the Strategic Plan development and by deferring them, they are taking out an input on an area of the program that is a big gap. Jeff said for the cultural elements, he feels it would be reasonable to expect that some things be used as placeholders in anticipation of getting recommendations from the PEPs.

The TWG reviewed the individual items:

ID	Defer/ Not Defer	Comments
PA #6, APE Study	Defer	This was Clayton's proposal for the study. Based on what Helen said and other things going on, it makes sense to defer at this time. (Barger)
Exp. Flows #4	Do not defer	Concerned that we won't be able to monitor a response if there one. (Davis) Not clear what this project is. (Persons) Limited GCMRC staff to do work. (Melis)
C3. Integrated Activ.	Defer	
E4. Admin & Mgmt	Defer *	Don't defer the Rec. PEP because timing of Rec. program is on heels of CRMP and Rec. program should be integrated with AMP and NPS needs. (Kaplinski) Concur with Matt. Int'l experts will provide valuable information. NPS should've done a long time ago. (Stevens) * Vote on Deferring Rec. PEP: Yes = 10, No = 5, Ab = 2
F6. Tech. Support	Defer	
HBC #8	Defer *	Concerned with deferring any HBC work. (Force) Denver Office can work on an RFP. (Peterson) * Defer in 05 with caveat that GCMRC will attempt in 04 with help from USBR.
HBC #15	Defer *	* Defer in 05 with caveat that GCMRC will attempt to do in 04 with assistance from USBR.
HBC #17	Defer	

Glen Canyon Dam Maintenance & TCD Schedule. Ken Rice said the purpose of his presentation would be to present information on how the TCD would intertwine with the maintenance schedule at Glen Canyon Dam. He gave a PowerPoint presentation (**Attachment 4a**). Questions and answers were recorded (**Attachment 4b**).

Ken reminded the TWG that the generator maintenance can be adjusted but to keep in mind that if they want 30,000 cfs out of the powerplant and 15,000 out of the bypass tubes, there has to be some level of maintenance done on them. They can't be run to failure because per unit they would lose 3,500 to 4,000 cfs. He feels it is imperative to continue with the maintenance, try to tie in the schedule with the TCD, and then consider new flow regimes.

ACTION ITEM: The GCMRC, BOR and WAPA will work together in developing a plan for handling any changes affecting the GCD maintenance schedule and/or TCD construction and

will provide recommendations to the TWG on what to do. The TWG will provide comments to Ken Rice by April 30, 2004.

Activity Schedule (cont.) Norm asked if the TWG had any objection to adopting the revised activity schedule. Lisa asked what the difference was between the **original** schedule and the **revised** schedule. Dennis said the original schedule was done as an assignment of the TWG to a group of individuals at the close of the last TWG meeting to put together a matrix of all the tasks to be done. He and Norm then started pushing things out and came up with the revised schedule. Dennis commented that the outyear budget process starts in different months but it also includes and assumes that the core monitoring plan and the long-term experimental plan will be developed. Norm said that with this plan all the documents will either be completed or in the final stages of completion and the TWG will know enough about what is being proposed for the FY06-07 budget.

Based on further TWG discussion, the Research Plan time frame was extended out to the end of July 2005 and the TCD EA Development and ESA/BO were extended to the end of April 2005.

Bill Persons commented that delaying the TCD work may cause some heartburn. Dennis reminded him that the TCD can't be constructed without funding and there isn't going to be any funding for it until FY06. He said that part of the reason for delaying was hearing people say that there may be warmer water, let's collect the data, try to understand what resource responses are, and fold that into the EA. Bill questioned if that meant delaying the science plan as well. Dennis said the science plan would be developed pre- and post- construction. Dennis asked if the thought was to develop a separate TCD science plan. The long-term experimental plan would include TCD operation but would it be the single sole science plan or other separate science plans for different elements? Dennis said it's likely there will be one long-term experimental plan followed by an implementation plan.

Bill Davis expressed concern that the response with having the TCD would be so subtle that change would be hard to detect. He asked Dennis if he had any thought as to what changes he would be looking for. Dennis responded that he did have a set of metrics in mind: On the positive side the target species is the endangered humpback chub and the major metric is recruitment, improve recruitment in that species that would be occurring in the mainstem. One would have to identify the mainstem rather than in the LCR but on the other side, there are a bunch of negatives that hopefully are not occurring so basically they would try to get a positive response out of the target species without getting the negative responses out of those other components like parasites, like non-native species.

Dennis said the target is going to be change in survivorship by HBC that exit the LCR during late summer. It's probably the only component of the life history that can be impacted with two units. It's also the component that has the least conflict between the various purposes of the dam. Additionally, if what is being done is moving toward recovery, then they now have recovery goals. There are 3,000-4,000 fish in the system right now but the hope is to improve that number.

The TWG accepted the revised 2004-2005 activity schedule as a working document.

Updates. Dennis said he wanted to bring up some projects that weren't covered in the morning discussion and get updates from several TWG members:

HBC Genetics Management Plan – Mary Barger reported that Region 6 said they will have it done by the end of the fiscal year (Sept. 30) and they will do it in coordination with Region 2.

ACTION ITEM: Mary Barger will provide updates on the HBC Genetics Management Plan at upcoming TWG meetings.

Willow Beach Genetics Assessment – Glen Knowles said they have extracted the DNA from the samples. Right now they're in limbo because the geneticist that did the work has left their agency. They've advertised the position but have not filled it yet. That work was being done at Dexter, New Mexico. They haven't screened the samples against the primers they have and will finish that work once the geneticist position is filled.

ACTION ITEM: Glen Knowles track the status of the Willow Beach Genetics Assessment and provide copies of that report upon completion.

HBC Genetics (Douglas) Work. Ted reported the genetics work is being done at Colorado State University. They expect to have the draft report by July and the final by January 2005.

Feasibility Assessment. Dennis said this was the report on three methods of augmentation that was reported to the TWG as a draft that was sent out for review and that it was also the feasibility study that is identified in the motion for the Hualapai fish facility. Ted said GCMRC needs to request a second revision so they need to contact Steve Gloss on this. Ted will try and report on this later.

ACTION ITEM: GCMRC (Ted Melis) will endeavor to provide copies of the HBC Genetics report being done by Mike and Marlis Douglas. GCMRC will provide copies of the draft report by July 31, 2004, or sooner, in order to provide to present to the AMWG at their August 9-10, 2004, meeting.

ACTION ITEM: GCMRC (Ted Melis) will endeavor to provide copies of the Feasibility Assessment and provide copies of the report to the TWG upon completion, and to the AMWG for their August 9-10, 2004, meeting.

Strategic Planning – Jeff Lovich gave a PowerPoint presentation (**Attachment 5a**). He also passed out copies of the "Outline of the GCMRC Strategic Plan" (**Attachment 5b**).

Comments:

- *Suggestions: #3. Connect with DOI Strategic Plan and Executive Orders and Secretarial Orders dealing with tribal consultation, and government-to-government relationships. #5, includes consultation and coordination with tribes to get a tribal perspective vs. western science. #7. Look at workforce planning and consider tribal internships, cooperative agreements, exchange programs, or details of other persons to the GCMRC. #8. As part of establishing a Science Council, make sure you have someone who understands the tribal perspective on that science council or bring someone in for that purpose.*
- *Need for the SCORE Report and keeping a good inventory of various resources, what is good and bad for them so as we go through we can look at developing our strategic actions, we have something to refer to. (Seaholm)*

Process concern: Dennis said that one of the things the TWG seems to do is talk and then we talk about a subject and then we go onto the next, and the next. I think it will help us a lot if we have someone typing and then let's try to stick with a subject or develop a flow or an outline as we go. If we could just stay with the same thoughts on how we're going to get this done. He asked if everyone's ideas were captured in what Norm had written down.

Core Monitoring Plan. Jeff identified the resources to be monitored in the core monitoring plan. He anticipates having a draft plan by Sept. 30, 2004. He said he would like to get an ad hoc group established and believes the group will have to meet at least once a month to meet the deadline.

Norm suggested the TWG discuss the plan in an effort to know what will go into each of them.

Comments:

- *Need to get advice on what we need to measure. (Ritenour)*
- *What's the process for pairing things down? The sequencing process on the INs was good. Does it make sense we do that for the CMINs? (Kubly)*
- *Could the MATA process be used? (Yeatts)*
- *Do we need a MATA workshop just for core monitoring? (Stevens)*
- *Need to focus monitoring efforts within the available budget. (Seaholm)*
- *Do we need to talk to the Park about certain methodologies and getting the permitting that is needed? (Barger)*
- *Think about the end game – the INs. The end game for the core monitoring plan is the SCORE Report. Are we meeting our MOs or not? (Peterson)*
- *There's no room for collaboration between GCMRC staff and outside contractors. (Kaplinski)*
- *What is required for the FACA committee to do its job and then build from there. (Melis)*
- *Need to figure out what is essential and what part isn't being addressed. Have detailed discussions to find out what all the aspects are. (Peterson)*

Jeff said he was eager to establish a Core Monitoring Ad Hoc Group (CMAHG) and get the process started. He envisioned the first meeting would focus on generating a table of contents and a timetable for completing assignments. The TWG discussed the charge for the ad hoc group.

Comments:

- *What are the thoughts about starting with the broadest context and let's say that every CMIN out there and identifying whether or not monitoring is being done now that covers that CMIN. (Kubly)*
- *See whether the CMINs are addressed and see whether or not the information you're getting gives you an indication of whether or not the resource is going in the direction that was stated in the EIS. (Seaholm)*
- *Have questions about some of the CMINs.*

CMAHG CHARGE: The CMAHG will work with GCMRC in developing a core monitoring plan with a final draft by Sept 30, 2004.

Chair: Jeff Lovich

Members: Mary Barger, Marklyn Chee, Bill Davis, Norm Henderson, Matt Kaplinski, Glen Knowles, Dennis Kubly, Ken McMullen, Bill Persons, Randy Seaholm, Mark Steffen, Larry Stevens, John Ritenour, and Mike Yeatts

Date: April 9, 2004

Time: 8:30 AM (AZ time) – 4 p.m.

Place: GCMRC (Flagstaff)

ACTION ITEM: Jeff Lovich will send out an agenda and more details as needed for the Core Monitoring AHG meeting. The group will work on a timeline, table of contents, deliverable due dates.

MATA Discussion. Norm said with the remaining time, the TWG could talk about the research planning for the long-term experimental plan and how the MATA discussion may fold into work being done by the CMAHG.

Comments:

- *For the long-term planning there is a lot of interest around the table and when we do the MATA, we have a good response but not a whole TWG response and when we've had meetings that have really addressed the long-term experimental flow, you don't get a full response but you do get people who are interested. Would prefer to have a TWG meeting for 2-3 days which will talk about a long-term experimental flow, have an agenda, and figure out to get it implemented and then create an ad hoc group if it is necessary. (Barger)*
- *It might be advisable to come into this process after the SAB river trip (April 21-29) so we have the advantage of their input. Also need to get AMWG input on the MATA process. What's the comfort level with the probabilities table and then doing the scenarios? (Kubly)*
- *Need to finish the MATA process. (Kaplinski)*
- *Josh Korman is going to complete a draft report by the summer meeting. (Melis)*

Norm asked if the sense of the TWG was to ask the science advisors to evaluate the MATA process, look at the consequence table, and then get back to the TWG with some type of review. Dennis said the science advisors are the experts in the field but they may feel uncomfortable in assigning a probability to a response for a given resource in Grand Canyon. Jeff said the science advisors have a lot of things to discuss while on the river trip and felt there should be a formal request made to the science advisors asking them to do a formal review.

Next TWG Meeting. The TWG reviewed possible meeting dates and agreed to the following:

Date: May 3-4, 2004

Purpose: Discussion on the Long-term Experimental Plan

Place: Bureau of Indian Affairs (2 Arizona Center, 12th Floor)

Adjourned: 5:15 p.m.

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Committee Members Absent:

Jonathan Damp, Pueblo of Zuni
Illa Bullets, So. Paiute Consortium
Robert King, UDWR

John Shields, WY State Engineer's Office
John Whipple, NM Interstate Stream Comm.

Alternates Present:

For:

Interested Persons:

Kurt Dongoske, CREDA
Helen Fairley, USGS/GCMRC
James L. Fraijc, NACF
John "JD" Kite, USGS/GCMRC
Paul Li, Bob Lynch's Office
Bill Leibfried, Presenter
Jeff Lovich, USGS/GCMRC

Ted Melis, USGS/GCMRC
Anthony Miller, Colo. River Comm./NV
Randall Peterson, USBR
Fred Phillips, Fred Phillips Consulting, LLC
Ken Rice, USBR/Glen Canyon Dam
Sam Spiller, USFWS

Meeting Recorder: Linda Whetton, USBR

Convened: 8:10 AM

Welcome and Administrative Items. The chairman welcomed the members, alternates, and general public. A quorum was established, introductions were made, and attendance sheets distributed.

Larry Stevens asked Jeff when he thought the GCMRC Strategic Plan would be ready for evaluation by AMWG. Jeff said he would have a draft ready for the TWG and AMWG to review in July, followed by a comment period of one month.

Outyear Budget Process – Dennis said the Budget AHG has met twice since the February 2-3, 2004, TWG meeting, working on an out-year budget process with a multi-year approach. They came up with something for the TWG's consideration with the intent of bringing back in a final format at the May meeting and if they agree to the process, then it would be presented to the AMWG at their August 2004 meeting. It creates a dilemma in timing because the question becomes, do we wait to start the budget process until the AMWG says yes to this. If so, that puts us into mid-August. We know we have to move the schedule back somewhat from what is going to be portrayed here in FY06 and if you saw the revised activity schedule from yesterday, it advocated that the AMWG meet in March rather than January so that would be a delay of 2 months in the acceptance of what will be an FY06-07 budget, if agreed to the process. They would also be seeking from the AMWG at that meeting an agreement that they would delay their meeting from January 2005 to March 2005. Dennis distributed notes from the BAHG Meeting held on March 17-18, 2004 (**Attachment 6a**), and a spreadsheet (**Attachment 6b**). He then proceeded with a PowerPoint Presentation (**Attachment 6c**).

Comments on Spreadsheet:

- *Two things on format I wanted to see: (1) the tie to whatever task we were working on in the Strategic Plan, and (2) what was the source of funding – appropriations, power revenues. This could be on the one-page summary and not necessarily on the spreadsheet. (Seaholm)*
- *I'd like to see that information but you could hide the columns. Have all the categories and the level of reports received, dates, and level of review for each year but have it available in the spreadsheet. (Stevens)*
- *Don't make a distinction between the appropriations and power revenues. There aren't a set of projects funded solely out of power revenues. I would like more information and a specific charge if that needs to be included in the spreadsheet. (Lovich)*
- *The thought was to use power revenues for core monitoring. (Davis)*

Comments on Work Plan:

- *Don't know if we want level of detail on study plans as some may not be funded. (Fairley)*
- *No new work will take place until that level of review is in place. Also, consider having someone from a Federal agency come in and explain the budget process. (Lovich)*
- *AMWG/TWG members could participate in "Tin Cup" week (mid-to last week in March) in effort to get more funding for the AMP. (Barger)*
- *Suggest working with John Shields as he set up "tin cup" efforts every year as part of his role as chairman of the Management Committee. (Seaholm)*
- *In this system we don't know interactions between our various components and our resources very well. If we structure our activities around known interactions in this system, we would be in a different place with respect to the budget planning process. (Stevens)*

The TWG continued to discuss the budget spreadsheet in more detail.

Comments:

- *I liked the idea of having a 2-year budget with the hope of being able to buy a year off for GCMRC to not be spending so much time in work plan development and I don't see that this achieves that because we'll be doing it every year for 2 years. Maybe we could think about 3-year process with having 2 years locked in so that at least 1 out of every 3 years we wouldn't have to be preparing a budget. It may take having a 3rd year tacked on it to do that. (Fairley)*
- *The states look at a 2-year process and we found that if you do one year's worth of funding and then tentatively plan your next year, the tinkering with that next year budget is fairly minor. I have a lot of faith in the 2-year process. If you do enough planning, things fall into place. (Seaholm)*
- *What we do in the next 6 months is critical to getting this established and working. (Ritenour)*

If the TWG has any further comments, they should send to Dennis within the next 2 weeks.

Hualapai Fish Rearing Facility – Kerry Christensen began his presentation by offering an invitation to the TWG to visit the Hualapai Fish Facility. He then gave a PowerPoint presentation (**Attachment 7a**). Questions and answers were recorded (**Attachment 7b**).

ACTION ITEM: Randy Seaholm and Glen Knowles will draft a letter to the Upper Basin to get the HBC Genetics Management Plan completed.

Sam said it's important to have the AMWG's support for the fish facility. He said his agency is anxious to work with the Hualapai on developing the technology to raise the fish. He also felt strongly that the genetics management plan is needed and wants to be ready for the TCD. Lisa concurred with Sam and felt it would be important to put the issue on the agenda for the AMWG meeting in August.

Norm suggested the Humpback Chub AHG meet and discuss further. Sam concurred and extended an invitation to anyone who wanted to be involved.

Tamarisk Control – Fred Phillips presented "Riparian Restoration on the Colorado River" PowerPoint presentation (**Attachment 8a**).

Larry commented that for tamarisk to germinate, as clearly demonstrated with the 1996 flood and demonstrated with the opposite with the year 2000 flows, the timing of flows means everything to tamarisk in the Grand Canyon. If a flood is staged in March, one can avoid tamarisk germination. However, if high flows are staged in May, the entire canyon can be coated with tamarisk. The year 2000 flow provided the first big germination event of tamarisk since 1983 and that was actually a very small germination. Tamarisk cannot germinate in dry soil. If it rains in late May, that moisture doesn't hang around long enough to support tamarisk season. It is very much a flow and moisture level dominated germination process.

Tamarisk Removal in Grand Canyon Tributaries – Larry Stevens presented a PPT (**Attachment 8b**).

Larry said the site at Lees Ferry was selected because they had photos showing cottonwood willow being the dominant vegetation. They haven't pushed other sites yet unless there is documentation of native species there, but also aren't necessarily promoting those as places to replace tamarisk with native species.

Native Fish Habitat Restoration In Selected Tributaries of the Grand Canyon. Norm said that Bill Leibfried works for SWCA in Flagstaff and has been working on the Bright Angel Creek and now the feasibility study for the tributaries in Grand Canyon for the removal of non-natives

and evaluation of those tributaries for refugia for potentially putting HBC in. Bill said his presentation would be recap of what he presented at the AMWG meeting last August. He said these were NPS projects and funded by the GCNP and contracted to SWCA. He gave a PowerPoint presentation (**Attachment 9a**). Questions and answers were recorded (**Attachment 9b**).

TWG Effectiveness and Operating Procedures – Norm distributed copies of the TWG Operating Procedures (**Attachment 10a**) and a list of items (**Attachment 10b**) he felt the TWG should consider. He said some AMWG members expressed concern at the last AMWG meeting that the TWG wasn't as effective as it could be. However, he feels there are already some things that are helping to improve the TWG's effectiveness: (1) the new budget process, (2) planning documents that GCMRC is developing, (3) yearly tracking of the products, and (4) feedback from GCMRC on status of projects and products received.

In response to whether the USGS should be a member of the TWG, Jeff said he doesn't believe the USGS should have a seat on the TWG. He doesn't believe it is appropriate and has discussed it with Nick Melcher and Denny Fenn. He is going to make a formal request to Mike Gabaldon to remove a USGS chair on the TWG. He feels that needs to be done in order for the USGS to maintain their objectivity and distance from the management agencies and be as independent as possible. He likes being able to sit with the TWG but has not desire to become a TWG member.

Comments:

- *It would be really good for all of us to go back and look at the foundation documents in this process including the GCPA, the FACA, etc., and really think about what is the role of the TWG. Really it's to assist in the GCMRC in putting together science plans and so forth. It's the Technical Work Group. I'm not sure we're the budget work group. That's really GCMRC's role to develop the budget for this process. I don't think we need to sit here and micro manage how a few thousand dollars are being spent hither and yon like we always do. The AMWG even falls into that trap as well. I think the intent is to provide various participating agencies perspective when appropriate but not get ourselves wrapped around the axle. I'll tell you my observation is we aren't very effective at all. We do little things hither and yon but over the period of time since the Record of Decision, this has not been a particularly effective process. I really think we need to take a very self-critical look at ourselves and find out how best can we provide assistance to the Center, to our AMWG who are the Federal advisory committee, and assure that the Secretary is getting good advice, which is all we can do. (Harris)*
- *This is just kind of a tool. It was earlier mentioned how the RIP program operates. As we go through, it would be really nice if Linda's notes were visible on the screen and maybe switch back and forth between the presentations. I think that would improve our effectiveness and helps us understand where we're going. (Davis)*
- *In addition to your #3 about yearly tracking of products, I think you were describing that as tracking of products from GCMRC. I think it might be good for us to track TWG products, track ad hoc group deliveries. We should have a little blue time line for what's being developed within the TWG so we can at all points in time we know what is happening. (Kaplinski)*
- *I might suggest that when you send the agenda out, you identify the action items, the ones we're going to be expected to vote on. I've been surprised lots of time with votes coming up that I didn't expect to have a vote on and if there is an action item, there is a line in our Operating Procedures that say that if there is an action item, then all reasonable efforts should be made to get the material to people on that item with the distribution which is 10 days in advance. I think that really needs to be required. I think it will make us a lot more effective and I certainly would like to be able to check in before the meeting with the hydrologist, or fish biologist, etc. on a particular agenda item. If we're going to vote on something, we have to let people know in advance and provide the materials 10*

days before the meeting. If the materials aren't provided, then the agenda item is moved to the next meeting date. (Force)

- I've been frustrated by getting materials too close to the meeting time to be able to evaluate them or we're receiving them at the meeting so we don't have time to communicate with our AMWG members. According to our Appendix E in the Strategic Plan, we're supposed to comply with the Sunshine Act and all the regulations pertaining thereto as well as the Federal Advisory Committee Act for committees. Do we know what those are? The TWG is supposing to be functioning as a FACA. Just to make sure we're actually performing that function and may want to look at some of those regulations. (Stevens)
- Operating Procedures, #12, talks about the public visitors and open and closed meetings. We need to be more cognizant of our public and ensure opportunities for the public to have a voice in our topics of discussion on the agenda. We fail to do that either after each tracking item or at the end of the meetings. We need to get that back into our way of doing business. (Heuslein)
- Get us the materials before the meeting! It does cause me problems. If I come to the meeting and I have something that I have to consider that day and sometimes vote on that day, it's difficult. I'm not sure what the hang-up is there or what the difficulty is. Agenda are a bit too crowded and we're always under the gun to get things done. Either things take longer than we think they will or we don't plan to allow enough time for discussion. Suggest you send a draft agenda out and get input from the members or perhaps at the previous meeting we should talk about what should be on the next meeting's agenda to make sure we allow time. Would like having "new business" or some flexible time on the agenda and find out from the members if there are other things to be added to the agenda. (Persons)
- Thanks to Norm, Dennis, and Linda for keeping the program going because none of us wanted Norm's position. (Stevens)
- We have a list of ad hoc groups and what their charges are. I don't know if we need to hear a verbal report at each meeting but if they could combine each ad hoc group that has an ongoing task and provide a brief summary of their group's status of their activity is. They wouldn't have to be put on the agenda unless they needed further guidance and/or a decision from the TWG. (Seaholm)
- You will now set your next meeting without enough thought about what needs to get done before the next meeting and do you have time to get it done and then send it out prior to the meeting. My observation of this morning was that we ran up a lot of time in a very unfocused discussion. You didn't stay on the agenda item. I would go so far as to say that if the agenda materials aren't sent out in advance of the meeting, the agenda item gets thrown out. (Peterson)
- Need to figure how the TWG initiates an initiative (i.e., remote sensing change). It's confusing how things get approved for action. (Melis)
- Items on the agenda requiring a vote, should be listed as such. We hear presentations and there is no way to track information. After each of these, ask the question: Is there a decision to be made? Through a vote? Don't close the loop on data provided (Barger)
- Would like to underscore what Amy said about public involvement. Generally, the protocol is go to the TWG first for comments and then to the public. It's incumbent upon the TWG Chair to make sure that the comments or issues that are raised by each stakeholder are thoroughly considered so that the stakeholder walks away from the meeting feeling as though their concerns have been really considered. On contentious issues, the TWG has a tendency to re-plough the same ground and in doing that, progress is delayed. (Dongoske)
- We've already talked to Linda about trying what Norm is doing right now as a way of helping us focus and keep on track and paying attention to what other people are saying by giving us immediate visual feedback. I'm also going to advocate that we change the format of the agenda to be similar to the Upper Basin's. It is a more text based format. It allows more opportunity for additional comments on each of the items and it will be a format that Linda can actually have on display and be typing into so that when she is done with it, there will be less after-the-fact work in developing the meeting minutes. People may want to consider downloading meeting materials from the AMP web site in an effort to reduce paper and mailing costs. We may want to transition to more of an electronic medium. (Kubly)
- If you do that, put the links in the e-mail message. (Lehr)
- Another option is to put the information on disks. (Heuslein)

ACTION ITEM: The TWG will send additional comments to Norm and Dennis by April 14, 2004. The comments will be compiled and brought back to the TWG for further discussion.

Next TWG Meeting:

Date: May 3-4, 2004

Purpose: Discussion on the Long-term Experimental Plan

Place: Bureau of Indian Affairs (2 Arizona Center, 12th Floor)

Future TWG Meetings:

June 30- July 1

Future Agenda Items:

- Long-term experimental flows
- TWG Effectiveness/Review of TWG Operating Procedures
- Technical presentation – David Topping on synthesis project (Lees Ferry). A bigger presentation 30 minutes or more that should focus for the biologists.
- Nancy Hornewer could also present her final report.

Adjourned: 11:45 a.m.

Respectfully submitted,

Linda Whetton
U.S. Bureau of Reclamation

General Key to Adaptive Management Program Acronyms

ADWR – Arizona Dept. of Water Resources	NAAO – Native American Affairs Office
AF – Acre Feet	NAU – Northern Arizona University (Flagstaff, AZ)
AGFD – Arizona Game and Fish Department	NEPA – National Environmental Policy Act
AGU – American Geophysical Union	NGS – National Geodetic Survey
AMP – Adaptive Management Program	NHPA – National Historic Preservation Act
AMWG – Adaptive Management Work Group	NPS - National Park Service
AOP – Annual Operating Plan	NRC - National Research Council
BA – Biological Assessment	NWS - National Weather Service
BE – Biological Evaluation	O&M - Operations & Maintenance (USBR funding)
BHBF – Beach/Habitat-Building Flow	PA - Programmatic Agreement
BHMF – Beach/Habitat Maintenance Flow	PEP - Protocol Evaluation Panel
BHTF – Beach/Habitat Test Flow	Powerplant Capacity - 31,000 cfs
BIA – Bureau of Indian Affairs	Reclamation – U.S. Bureau of Reclamation
BO – Biological Opinion	RBT – Rainbow Trout
BOR – Bureau of Reclamation	RFP - Request For Proposals
CAPA – Central Arizona Project Assn.	RPA - Reasonable and Prudent Alternative
cfs – cubic feet per second	SAB - Science Advisory Board
CRBC – Colorado River Board of California	Secretary('s) - Secretary of the Interior
CRCN – Colorado River Commission of Nevada	SWCA - Steven W. Carothers Associates
CREDA – Colorado River Energy Distributors Assn.	TCD - Temperature Control Device (for Glen Canyon Dam water releases)
CRSP – Colorado River Storage Project	TCP - Traditional Cultural Property
CWCB – Colorado Water Conservation Board	TES - Threatened and Endangered Species
DBMS – Data Base Management System	TWG - Glen Canyon Technical Work Group (a subcommittee of the AMWG)
DOI – Department of the Interior	UCR - Upper Colorado Region (of the USBR)
EA – Environmental Assessment	UCRC - Upper Colorado River Commission
EIS – Environmental Impact Statement	UDWR - Utah Division of Water Resources
ESA – Endangered Species Act	USBR - United States Bureau of Reclamation
FACA – Federal Advisory Committee Act	USFWS - United States Fish & Wildlife Service
FEIS – Final Environmental Impact Statement	USGS - United States Geological Survey
FRN – Federal Register Notice	WAPA - Western Area Power Administration
FWS – United States Fish & Wildlife Service	WY – Water Year (a calendar year)
GCD – Glen Canyon Dam	
GCMRC – Grand Canyon Monitoring and Research Center	
GCNP – Grand Canyon National Park	
GCNRA – Glen Canyon National Recreation Area	
GCPA – Grand Canyon Protection Act	
GUI – Graphical User Interface	
HBC – Humpback Chub (endangered native fish)	
HMF – Habitat Maintenance Flow	
HPP – Historic Preservation Plan	
IEDA- Irrigation and Electrical Districts Association of Arizona	
IN – Information Need	
IT – Information Technology (GCMRC program)	
KAS – Kanab ambersnail (endangered native snail)	
LCR – Little Colorado River	
LRRMCP – Lower Colorado River Multi-Species Conservation Program	
MAF – Million Acre Feet	
MA – Management Action	
MO – Management Objective	
MRAP – Monitoring and Remedial Action Plan	